

JIG DESIGN

on the table of a drill press and the center punch was set in the chuck in the drill spindle so that the prick-punch mark on the dial could be lined up with the spindle. The plate was then strapped to the table and stud *C* driven into the center hole. The top of the stud *C* is machined to fit the pivot hole in the arm *D* of the jig.

The next step consisted of lining up the bushing *A* of the fixture with the center punch in the drill spindle. It will be noted that the bushing is made adjustable relative to the center *C* about which the arm swings, so that it may be set in the required position before clamping the binding bolt. The bushing is located in the proper relation to the notches in the dial plate by means of the locking pawl *E*, and the eccentric screw *F* adjusts the position of the pawl relative to the arm *I* of the jig. The pawl is held in the proper notch in the dial by the spring *G* which is mounted on the pins // and /; and stud *J* is used to hold the arm of the fixture true with the face of the dial plate. It will be evident that after this setting has been made, the bushing *A* is located directly over the center punch mark which was made on the dial plate while the prick-punch was mounted in the punch-block of the power press. The hole can now be drilled in the dial plate, after which successive holes are drilled by simply swinging the dial around the pivot *C* and locking it for drilling each hole by dropping the pawl *E* into successive notches in the dial plate.

Duplex Clamping Arrangement on Drill Jig. The jig shown in Fig. 36 is used for drilling and tapping stud *I*, which is made from 1- by $\frac{1}{8}$ -inch cold-drawn steel. The end of the stud enters hole *B* in the locating block, and this hole is milled to provide clearance for the head of the stud. The work rests on the drill bushing which is slightly eotmterbored to provide clearance for the tap. The most interesting feature of the jig is that the cover and clamping mechanism are both secured by the same knob; clamp *C* holds the stud securely in place when the knob is screwed down, and the same operation tightens the cover. It will be readily seen that this principle could be employed on jigs and fixtures used for holding a great variety of parts.